(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 29 April 2004 (29.04.2004)

PCT

(10) International Publication Number WO 2004/036917 A1

(51) International Patent Classification7: H04N 7/26, 5/445

(21) International Application Number:

PCT/IB2003/004215

(22) International Filing Date:

19 September 2003 (19.09.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 02079359.2

21 October 2002 (21.10.2002) EI

(71) Applicant (for all designated States except US): KONIN-KLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): EERENBERG, Onno [NL/NL]; c/o Prof . Holstlaan 6, NL-5656 AA Eindhoven (NL). GLJSBERS, Eric [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). BRANDSMA, Ewout [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

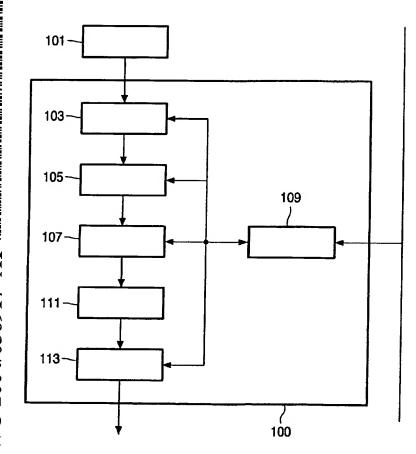
(74) Agent: DULJVESTIJN, Adrianus, J.; Philips Intellectual Property & Standards, Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),

[Continued on next page]

(54) Title: MANIPULATING SUB-PICTURES OF A COMPRESSED VIDEO SIGNAL



(57) Abstract: The invention relates to manipulation of sub-pictures (303) in a picture such as a mosaic screen (301). An apparatus comprises a sub-picture generator (105) connected to a mosaic screen generator (107), which generates the mosaic screen (301) from the sub-pictures. The mosaic screen (301) is by a video compressor (111) divided into uncompressed picture blocks such that each block only comprise video data from one sub-picture. The picture blocks are compressed using a block compression scheme such as MPEG-2. The apparatus further comprises a video manipulation processor (113), which manipulates the sub-pictures by manipulating the association between control data in the video signal and the compressed picture blocks. The video data of the compressed picture blocks are not affected whereby de-compression and new compression is avoided.